

REMARKS**Present Status of the Application**

The Office Action mailed February 15, 2002, rejected all claims 1-27. Specifically, the Office Action rejected claims 1-27 under 35 U.S.C. 103(a), as being unpatentable over Pariza et al. (U.S. Pat. No. 6,268,845). No claims are amended in this response, and Applicants respectfully submit that claims 1-27 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Summary of Applicants' Invention

The Applicants' invention is directed to a device and a method for updating the function of a monitor according to the invention. By using the USB signal lines directly for data transmission and recording the data of a monitor controller to the erasable programmable read only memory, data update can be achieved. Moreover, the erasable programmable read only memory can be updated by separating the recording path and the normal visual path using a recording path separator of the monitor controller. Compared to the prior art, the device and the method of the invention are more convenient and time saving for function update of the monitor.

Discussion of Office Action Rejections

The Office Action rejected claims 1-27 under 35 U.S.C. 103(a), as being unpatentable over Pariza et al. (Pariza, hereinafter). In response, Applicant respectfully traverses the rejections and interpretations for at least reasons set forth as follows. The requisite features of the present

invention are recited in the independent claims 1, 13 and 25, which are set forth immediately below:

1. A device for updating the function of a monitor, comprising:
 - USB signal lines for transmitting a recording command and recorded data;
 - a detecting device electrically coupled to the USB signal lines for detecting and outputting the recording command and the recorded data;
 - a starting device electrically coupled to the detecting device for receiving the recording command and the recorded data and then transmitting the recording command and the recorded data when the starting device is switched from a visual path to a recording path;*
 - a ROM recording command decoder for converting the recording command into a erase/read/write signal and the recorded data into a address signal and a data signal by switching the starting device to the recording path;
 - a ROM electrically connected to the ROM recording command decoder, of which data can be updated according to the address signal, the data signal and the erase/read/write signal; and
 - a recovery device electrically coupled to the ROM recording command decoder and the starting device for determining whether the data stored in the ROM are already updated according the address signal, the data signal and the read/write signal and for switching the starting device from the recording path to the visual path when the data of the ROM are already updated.*

(Emphasis added) Likewise, independent claim 13 recites:

13. A system for updating the function of a monitor, comprising:
 - a recording device for storing and outputting a recording command and recorded data;
 - USB signal lines electrically coupled to the recording device for transmitting the recording command and the recorded data; and
 - a monitor controller having a monitor in-system programming memory, electrically coupled to the USB signal lines, for modifying the monitor controller according to the recording command and the recorded data.

(Emphasis added) Also, independent claim 25 recites:

25. A method for updating the function of a monitor, comprising the steps of:
 - (a) performing a USB multi-setting command check to determine whether the signals on the USB signal lines are correct?
 - (b) setting the monitor into a monitor in-system programming mode?
 - (c) reading and determining a recording command; and

(d) reading recorded data and writing the recorded data in a memory and performing step (c) when the recording command is a write command;

(e) performing step (a) when the recording command is in a non-monitor in-system programming mode.

(Emphasis added). Applicant respectfully submits that independent claims 1, 12 and 25 patently define over the prior art for at least the reason that the prior art fails to adequately disclose those features emphasized above.

Claims 1-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pariza. The Office Action alleged that Pariza discloses and teaches the claimed invention. In response, Applicants respectfully disagree the rejection and the interpretations for at least reasons set forth as follows.

Pariza discloses a bezel button controls over USB. According to the Pariza reference, Pariza teaches that the buttons formed on the front bezel of the monitor function via the USB interface. When these buttons are actuated, commands are passed to the computer system via the USB interface. The bezel button comprises buttons for controlling CD-ROM playback, button for launching a software application, button for launching an internet browser, button for muting the speaker, and button for controlling the base and treble audio effects (*see col. 9, lines 57-67, col. 10, lines 1-7*).

In the Office Action, it stated that Pariza teaches a processor 100, A/D convertor 140, a ROM 134 and memory/PCI/Cache controller 108 which provides a data path to a main memory 112 (*col. 4, lines 47-53 and Fig. 1*). However, in Fig. 1, the ROM 134 is a CD-ROM rather than a ROM of the monitor controller as described in the invention.

For example, the Office Action further recites Pariza teaches selector 316, 318 which provide data output at specification as well as receive input from the switches 208, 218. Regarding to the selector 316, 318, they represent the buttons on the front bezel of the monitor for outputting the button command to the computer system, which is irrelevant to the present invention. Namely, selectors concerns how the button commands are transmitted to the computer system through the USB interface, rather than updating the ROM for the monitor controller as claimed in the invention (*see col. 9, lines 57-67, col. 10, lines 1-7*).

These buttons are designed for controlling the CD-ROM, for changing the audio properties (such as the base and treble), and for launching programs (such as some applications or internet browser) through the USB interface. Therefore, through the whole Pariza reference, Pariza fails to disclose, suggest or teach any method about updating the ROM of the monitor controller. Therefore, according to the teachings of Pariza, the ROM for the monitor controller cannot be updated via the USB interface.

In contrast, the present invention concerns how to update the contents of the ROM for the monitor controller, rather than how to establish a communication between the command buttons on the front bezel of the monitor via the USB. For example, independent claim 1 of the invention recites "*a starting device electrically coupled to the detecting device for receiving the recording command and the recorded data and then transmitting the recording command and the recorded data when the starting device is switched from a visual path to a recording path;* a ROM recording command decoder for converting the recording command into a erase/read/write signal and the recorded data into a address signal and a data signal by switching

the starting device to the recording path; a ROM electrically connected to the ROM recording command decoder, of which data can be updated according to the address signal, the data signal and the erase/read/write signal; and *a recovery device electrically coupled to the ROM recording command decoder and the starting device for determining whether the data stored in the ROM are already updated according the address signal, the data signal and the read/write signal and for switching the starting device from the recording path to the visual path when the data of the ROM are already updated.*" These elements and their corresponding function are not disclosed or taught by Pariza.

Accordingly, Pariza's disclosure relates to simulating an OSD (on screen display) IC function by a software manner. Pariza can change parameter values of some certain functions (so-called physical functions of the monitor) that have been recorded in the ROM. If the physical functions of the monitor have not been updated, for example adding some new functions or debugging some errors, Pariza can only vary the parameter values of the existed functions. However, the present invention is used for updating the contents of the ROM, which can add new functions or debug the programs in the ROM by an in-system way, rather than for simulating an OSD function as disclosed by Pariza.

For at least the reasons set out above, Pariza fails to teach, disclose or suggest any method for updating the contents of the ROM to modify the function and to debug. According to Pariza's teachings, one can only learn how to use the USB interface to establish a communication path between the buttons on the front bezel of the monitor and the computer system (or the

operating system). Accordingly, the present invention clearly distinguishes over the Pariza reference.

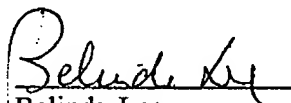
For at least the foregoing reasons, Applicants respectfully submits that independent claims 1, 13 and 25 patently define over the prior art, and should be allowed. For at least the same reasons, dependent claims 2-12, 14-24 and 26-27 patently define over the prior art as well and should be allowed.

CONCLUSION

For at least the foregoing reasons, it is believe that all pending claims 1-27 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is hereby invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,

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